

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssseptal600txm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	NOV 21	CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present
NEWS 3	NOV 26	MARPAT enhanced with F8ORT command
NEWS 4	NOV 26	CHEMSAFE now available on STN Easy
NEWS 5	NOV 26	Two new SET commands increase convenience of STN searching
NEWS 6	DEC 01	ChemPort single article sales feature unavailable
NEWS 7	DEC 12	GBFULL now offers single source for full-text coverage of complete UK patent families
NEWS 8	DEC 17	Fifty-one pharmaceutical ingredients added to PS
NEWS 9	JAN 06	The retention policy for unread STNmail messages will change in 2009 for STN-Columbus and STN-Tokyo
NEWS 10	JAN 07	WEIDS, WPINDEX, and WPIX enhanced Japanese Patent Classification Data
NEWS 11	FEB 02	Simultaneous left and right truncation (SLART) added for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
NEWS 12	FEB 02	GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS 13	FEB 06	Patent sequence location (PSL) data added to USGENE
NEWS 14	FEB 10	COMPENDEX reloaded and enhanced
NEWS 15	FEB 11	WTEXTILES reloaded and enhanced
NEWS 16	FEB 19	New patent-examiner citations in 300,000 CA/CAPLUS patent records provide insights into related prior art
NEWS 17	FEB 19	Increase the precision of your patent queries -- use terms from the IPC Thesaurus, Version 2009.01
NEWS 18	FEB 23	Several formats for image display and print options discontinued in USPATFULL and USPAT2
NEWS 19	FEB 23	MEDLINE now offers more precise author group fields and 2009 MeSH terms
NEWS 20	FEB 23	TOXCENTER updates mirror those of MEDLINE -- more precise author group fields and 2009 MeSH terms
NEWS 21	FEB 23	Three million new patent records blast AEROSPACE into STN patent clusters
NEWS 22	FEB 25	USGENE enhanced with patent family and legal status display data from INPADOCDB
NEWS 23	MAR 06	INPADOCDB and INPAFAMDB enhanced with new display formats
NEWS 24	MAR 11	EPFULL backfile enhanced with additional full-text applications and grants
NEWS 25	MAR 11	ESBIORASE reloaded and enhanced
NEWS EXPRESS	JUNE 27 08	CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.
NEWS HOURS		STN Operating Hours Plus Help Desk Availability
NEWS LOGIN		Welcome Banner and News Items
NEWS IPC8		For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may

10/564,476

result in loss of user privileges and other penalties.

***** STN Columbus *****

FILE 'HOME' ENTERED AT 17:28:28 ON 16 MAR 2009

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.22

0.22

FILE 'REGISTRY' ENTERED AT 17:29:06 ON 16 MAR 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 MAR 2009 HIGHEST RN 1121544-94-2

DICTIONARY FILE UPDATES: 15 MAR 2009 HIGHEST RN 1121544-94-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

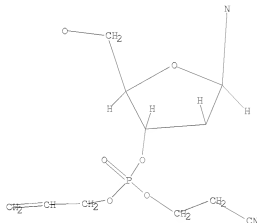
Uploading C:\Program Files\Stnexp\Queries\10564476claim7.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 17:29:32 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 151 TO ITERATE

McIntosh

100.0% PROCESSED 151 ITERATIONS 0 ANSWERS
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 2283 TO 3757
 PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s 11 full
 FULL SEARCH INITIATED 17:29:36 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 2752 TO ITERATE

100.0% PROCESSED 2752 ITERATIONS 11 ANSWERS
 SEARCH TIME: 00.00.01

L3 11 SEA SSS FUL L1

=> file caplus
 COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL
 FULL ESTIMATED COST 185.88 186.10

FILE 'CAPLUS' ENTERED AT 17:29:42 ON 16 MAR 2009
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 16 Mar 2009 VOL 150 ISS 12
 FILE LAST UPDATED: 15 Mar 2009 (20090315/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13
 L4 6 L3

=> d bib abs hitstr 1-6 L4

L4 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:1199729 CAPLUS
 DN 148:55317
 TI Synthesis of cyclic bis(3'-5')-2'-deoxyguanylyl/guanylyl acid (c-dGpGp) and its biological activities to microbes
 AU Mano, Erina; Hyodo, Mamoru; Sato, Yumi; Ishihara, Yuka; Ohta, Michio; Hayakawa, Yoshihiro
 CS Graduate School of Information Science/Human Informatics and CREST of JST, Nagoya University, Furo-cho, Chikusa, Nagoya, 464-8601, Japan
 SO ChemMedChem (2007), 2(10), 1410-1413
 CODEN: CHEMGM; ISSN: 1860-7179
 PB Wiley-VCH Verlag GmbH & Co. KGaA
 DT Journal
 LA English

OS CASREACT 148:55317

AB In this study, the authors describe a novel synthetic method for preparation of cyclic bis-(3'-5')-2'-deoxyguanylic/guanylic acid (c-dGpGp). The effect of c-dGpGp on the biofilm formation and motility of several bacteria was examined. C-diGMP promoted the motility of *P. aeruginosa* and *V. parahaemolyticus*, but repressed the motility of *S. typhimurium*; on the other hand, c-dGpGp weakly repressed the motility of all of the bacteria. The conformational difference in c-dGpGp and c-diGMP may be one of the factors causing their different biol. properties.

IT 960065-34-3P 960065-36-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

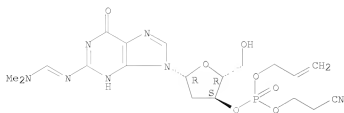
(synthesis of cyclic bis-deoxyguanylic guanylic acid and its effect on motility of some bacteria)

RN 960065-34-3 CAPLUS

CN 3'-Guanylic acid, 2'-deoxy-N-[(dimethylamino)methylene]-, 2-cyanoethyl 2-propen-1-yl ester (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



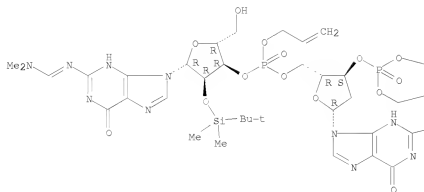
RN 960065-36-5 CAPLUS

CN 3'-Guanylic acid, N-[(dimethylamino)methylene]-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-P-2-propen-1-ylguanylyl-(3'+5')-N-[(dimethylamino)methylene]-, 3'-(2-cyanoethyl) 3'-(2-propen-1-yl) ester (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

PAGE 1-A





RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:207013 CAPLUS

DN 144:450867

TI Synthesis of cyclic bis(3'-5')diguanylic acid (c-di-GMP) analogs

AU Hyodo, Mamoru; Sato, Yumi; Hayakawa, Yoshihiro

CS Graduate School of Information Science/Human Informatics and CREST JST,

Nagoya University, Chikusa, Nagoya, 464-8601, Japan

SO Tetrahedron (2006), 62(13), 3089-3094

CODEN: TETRA8; ISSN: 0040-4020

PB Elsevier B.V.

DT Journal

LA English

OS CASREACT 144:450867

AB This paper reports the synthesis of cyclic bis(3'-5')diguanylic acid (c-di-GMP) analogs, including the monophosphorothioic acid of c-di-GMP (c-GpGps), cyclic bis(3'-5')guanylic/adenylic acid (c-GpAp), and cyclic bis(3'-5')guanylic/inosinic acid (c-GpIp). These compds. are expected to be important, both in elucidating the mechanism of bioactive c-di-GMP and in designing and creating new bioactive c-di-GMP-related artificial deriva.

IT 827602-96-0 885370-28-5

RL: RCT (Reactant); RACT (Reactant or reagent)

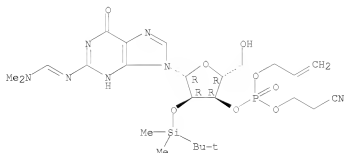
(synthesis of cyclic bis(3'-5')diguanylic acid analogs including the monophosphorothioic acid of c-di-GMP, cyclic bis(3'-5')guanylic/adenylic acid, and cyclic bis(3'-5')guanylic/inosinic acid)

RN 827602-96-0 CAPLUS

CN 3'-Guanylic acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-N-[(dimethylamino)methylene]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

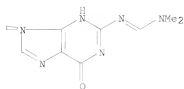
Double bond geometry unknown.



RN 885370-28-5 CAPLUS

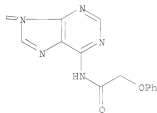
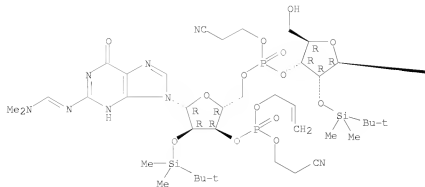
CN 3'-Inosinic acid, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-[2-(4-nitrophenyl)ethoxy]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 885370-26-3 CAPLUS
 CN 3'-Guanylic acid, P-(2-cyanoethyl)-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-
 N-(phenoxycacetyl)adenylyl-(3'→5')-N-[(dimethylamino)methylene]-2'-O-
 [(1,1-dimethylethyl)dimethylsilyl]-, 2-cyanoethyl 2-propenyl ester (9CI)
 (CA INDEX NAME)

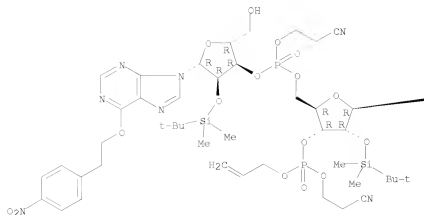
Absolute stereochemistry.
 Double bond geometry unknown.



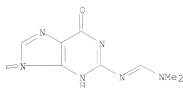
RN 885370-29-6 CAPLUS
 CN 3'-Guanylic acid, P-(2-cyanoethyl)-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-
 6-O-(2-(4-nitrophenyl)ethyl)inosinylyl-(3'→5')-N-
 [(dimethylamino)methylene]-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-,
 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.

PAGE 1-A



PAGE 1-B



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:58224 CAPLUS
DN 142:156269
TI Method of synthesizing cyclic dinucleotide
IN Hayakawa, Yoshihiro
PA Mitsui Chemicals, Inc., Japan
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

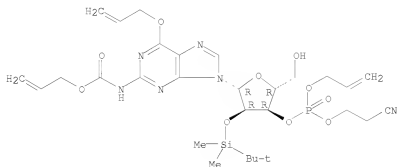
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 200505450	A1	20050120	WO 2004-JP7000	20040517
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BE, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SI, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1645561	A1	20060412	EP 2004-733482	20040517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
US 20060167241	A1	20060727	US 2006-564476	20060113
PRAI JP 2003-274389	A	20030715		

WO 2004-JP7000 W 20040517
 OS MARPAT 142:156269
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

- AB A compound represented by the general formula (I) (wherein R₂, R₃ = H, halo, OMe, 2-methoxyethoxy, HO; B₂, B₃ = a nucleic acid base) or a salt thereof can be synthesized from a compound represented by the general formula (II) (wherein R₁ = H, halo, OMe, 2-methoxyethoxy, HO substituted by a hydroxy-protecting group; B₁ = an optionally protected nucleic acid base). Cyclic bis(3'-5')dinucleotide I is useful as an anticancer agent (no data). Thus, N₂-(allyloxycarbonyl)-O⁶-allyl-2'-O-(tert-butylidimethylsilyl)-5'-O-(4,4'-dimethoxytrityl)guanosine 3'-O-(allyl N,N-diisopropylphosphoramidite) (III) was condensed with 2'-cyanoethanol in the presence of imidazolium perchlorate and mol. sieve 3A in MeCN followed by treatment with imidazolium perchlorate for oxidation and then with dichloroacetic acid in CH₂Cl₂ for deprotection of 4,4'-dimethoxytrityl group gave guanosine phosphate triester (IV) (R = CH₂CH₂CN) which was similarly coupled with III to give dinucleotide IV (R = Q). IV (R = Q) was stirred with a mixture of 28% aqueous NH₃ and MeOH at room temperature for 30 min, concentrated under reduced pressure, taken up in toluene three times and each time concentrated under reduced pressure, dissolved in THF, treated with N-methylimidazole and triisopropylbenzenesulfonyl chloride, and stirred at room temperature for 20 h to give protected cyclic dinucleotide (V) which was deprotected by treatment with Ph₃P, n-butylamine, formic acid, and Pd₂(C₆H₄CH=CH)₂CO₂ 3.CHCl₃ in THF at room temperature for 10 min and then with Et₃N.3HF complex at room temperature for 12 h to give cyclic diguanylate I (B₂ = B₃ = guanine residue).
- IT 609343-79-5P 609343-80-8P 827602-96-0P
 827602-97-1P
 RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (method of synthesizing anticancer cyclic dinucleotide and intermediates thereof)
- RN 609343-79-5 CAPLUS
 CN 3'-Guanylic acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

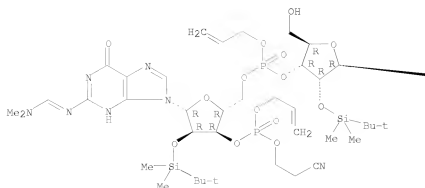
Absolute stereochemistry.



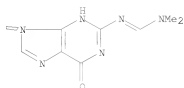
- RN 609343-80-8 CAPLUS
 CN 3'-Guanylic acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-P-2-propenyl-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]guanylyl-(3'-5')-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:1038011 CAPLUS

DN 142:156254

TI An improved method for synthesizing cyclic bis(3'-5')diguanlylic acid
(c-di-GMP)

AU Hyodo, Mamoru; Hayakawa, Yoshihiro

CS Graduate School of Information Science/Human Informatics and CREST JST,
Nagoya University, Nagoya, 464-8601, Japan

SO Bulletin of the Chemical Society of Japan (2004), 77(11), 2089-2093

CODEN: BCSJAH; ISSN: 0009-2673

PE Chemical Society of Japan

DT Journal

LA English

OS CASREACT 142:156254

AB This paper describes a new method for synthesizing biol. important cyclic bis(3'-5')diguanlylic acid (c-di-GMP) in a higher yield than that previously reported to be available by our synthetic method. In the new synthesis, the following two means, in place of those used in the previously reported synthesis, are employed as main strategies to obtain an increase in product yield. One is the use of di-tert-butylsilyl protection for 3'- and 5'-hydroxy groups of guanosine; this method allows regioselective production of a 2'-O-(tert-butylidimethylsilyl)guanosine derivative that is a key intermediate for the synthesis. The other is the use of a dimethylformamidine group as a protector for the 2-NH2 function of the guanine base, which can be easily introduced and results in an excellent yield.

IT 827602-96-OP 830330-55-7P

RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

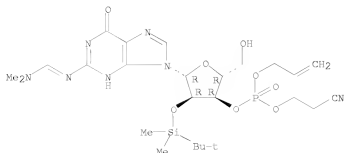
(preparation of cyclic bis(3'-5')diguanlylic acid using
di-tert-butylsilyl protection of the 3' and 5' hydroxy groups and
dimethylformamidine to protect the amino group of the guanine base)

RN 827602-96-0 CAPLUS

CN 3'-Guanylic acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-N-[(dimethylamino)methylene]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

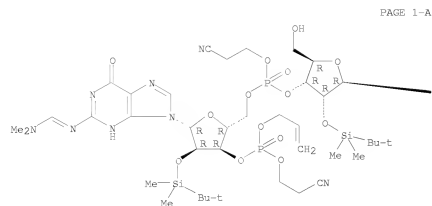


RN 830330-55-7 CAPLUS

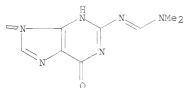
CN 3'-Guanylic acid, P-(2-cyanoethyl)-N-[(dimethylamino)methylene]-2'-O-[(1,1-dimethylethyl)dimethylsilyl]guanylyl-(3'→5')-N-[(dimethylamino)methylene]-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

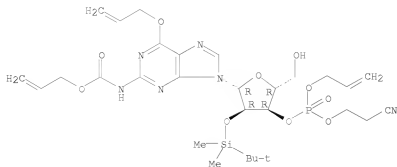


PAGE 1-B

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2003:677651 CAPLUS
 DN 140:199576
 TI A new synthetic approach to cyclic bis(3'-5')diguanilyc acid
 AU Kawai, Rie; Nagata, Reiko; Hirata, Akiyoshi; Hayakawa, Yoshihiro
 CS Graduate School of Human Informatics, Nagoya University, Nagoya, 464-8601, Japan
 SO Nucleic Acids Research Supplement (2003), 3(3rd International Symposium on Nucleic Acids Chemistry [and] 30th Symposium on Nucleic Acids Chemistry in Japan, 2003), 103-104
 CODEN: NARSCE
 PE Oxford University Press
 DT Journal
 LA English
 AB A symposium. We developed a novel synthesis of biol. important cyclic bis(3'-5')diguanilyc acid (cGpGp). The present synthesis includes two strategies different from those employed in an existing synthesis. They are the phosphoramidite method for the preparation of a guanylyl(3'-5')guanilyc acid intermediate and allyl protection for guanine bases and internucleotide linkages. These distinctive strategies have allowed the new synthesis to provide the target compound in a higher yield than that of the existing synthesis.
 IT 609343-79-5P 609343-80-8P
 RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of cyclic bis(3'-5')diguanilyc acid via phosphoramidite method and allyl protection for guanine bases and internucleotide linkages)
 RN 609343-79-5 CAPLUS
 CN 3'-Guanilyc acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

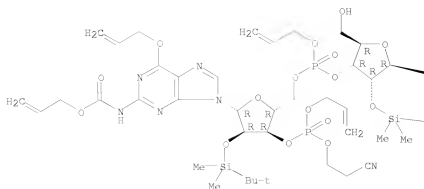
Absolute stereochemistry.



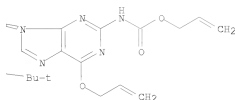
RN 609343-80-8 CAPLUS
 CN 3'-Guanilyc acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-P-2-propenyl-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]guanylyl-(3'-5')-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:598480 CAPLUS
DN 139:292443
TI A facile synthesis of cyclic bis(3'-5')diguanlylic acid
AU Hayakawa, Yoshihiro; Nagata, Reiko; Hirata, Akiyoshi; Hyodo, Mamoru;
Kawai, Rie
CS Laboratory of Bioorganic Chemistry, Graduate School of Human Informatics,
Nagoya University, Nagoya, 464-8601, Japan
SO Tetrahedron (2003), 59(34), 6465-6471
CODEN: TETRA3; ISSN: 0040-4020
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 139:292443
AB This paper describes a new method for synthesizing biol. important cyclic bis(3'-5')diguanlylic acid (cGpGp) in a higher yield than that of the existing synthetic method. In the new synthesis, the following two means, in place of those used in the existing synthesis are employed as main strategies to cause the increase in product yield. One of these distinctive strategies in the new synthesis is that the phosphoramidite method is used for the preparation of a key synthetic intermediate of a linear guanylyl(3'-5')guanylylic acid derivative. This method allowed higher-yield formation of the intermediate than that by the triester method used in the existing synthesis. The second distinctive strategy used in the new synthesis is that allyloxycarbonyl and allyl groups are used for the protection of two guanine bases and two internucleotide bonds, resp. These four allylic protectors can be removed all at once by the organopalladium-catalyzed reaction under neutral conditions. Thus, deprotection of the protected cGpGp precursor was achieved in the present synthesis in a shorter step and under milder conditions than the deprotection achieved in the existing synthesis, which uses diphenylacetyl

and o-chlorophenyl groups as protectors for two guanine bases and two internucleotide bonds, resp., whose full removal requires two different procedures including rather harsh basic treatment. As a result, tech. loss and decomposition of the target product in the new synthesis is remarkably reduced.

IT 609343-79-5P 609343-80-8P

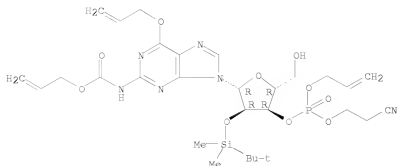
RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of cyclic diguanylic acid dinucleotides using allyloxycarbonyl and allyl protecting groups)

RN 609343-79-5 CAPLUS

CN 3'-Guanilyc acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

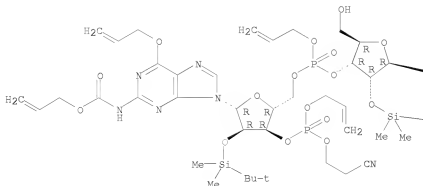


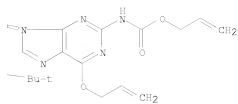
RN 609343-80-8 CAPLUS

CN 3'-Guanilyc acid, 2'-O-[(1,1-dimethylethyl)dimethylsilyl]-P-2-propenyl-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]guanylyl-(3'+5')-2'-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-2-propenyl-N-[(2-propenyloxy)carbonyl]-, 2-cyanoethyl 2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT